

Association between the HLA-G*0105N polymorphism and recurrent abortion in women

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*Abstract

Background: In human pregnancies HLA-G (Human leukocyte antigens G) is supposed that play a main role in implantation. It is expressed on trophoblast cells that invades during pregnancy to the uterus decidua and is introduced to induce maternal tolerance immunologically against the fetus.

Objective: The aim of this study was to find association between the HLA-G*0105N polymorphism and recurrent abortion in women.

Methods: This case-control study was conducted on two groups of 108 women with history recurrent abortion (RSA) as a case group or without history RSA as a control group in Cellular and Molecular Research Center, Qazvin University of Medical Sciences in 2015. The frequency of null allele of HLA-G*0105N was studied in two groups by PCR-RFLP method. Allele and genotype frequencies of two group were compared using Hardy-Weinberg equilibrium and Chi-square test.

Findings: In case group, 54 (50%) and 17 (15.7%) were heterozygous and homozygous respectively for HLA-G*0105N polymorphism. In control group, only 9 (8%) was homozygous for HLA-G*0105N polymorphism. But there was no significant difference between case and control on HLA-G*0105N allele with RSA ($P=0.1004$).

Conclusion: As the results, there was no significant association between HLA-G*0105N polymorphism and RSA. Thus, it seems that this HLA-G*0105N polymorphism may effective in relation with other genes or polymorphisms in RSA.

Keywords: HLA-G*0105N, Polymorphism, Recurrent spontaneous abortion

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